



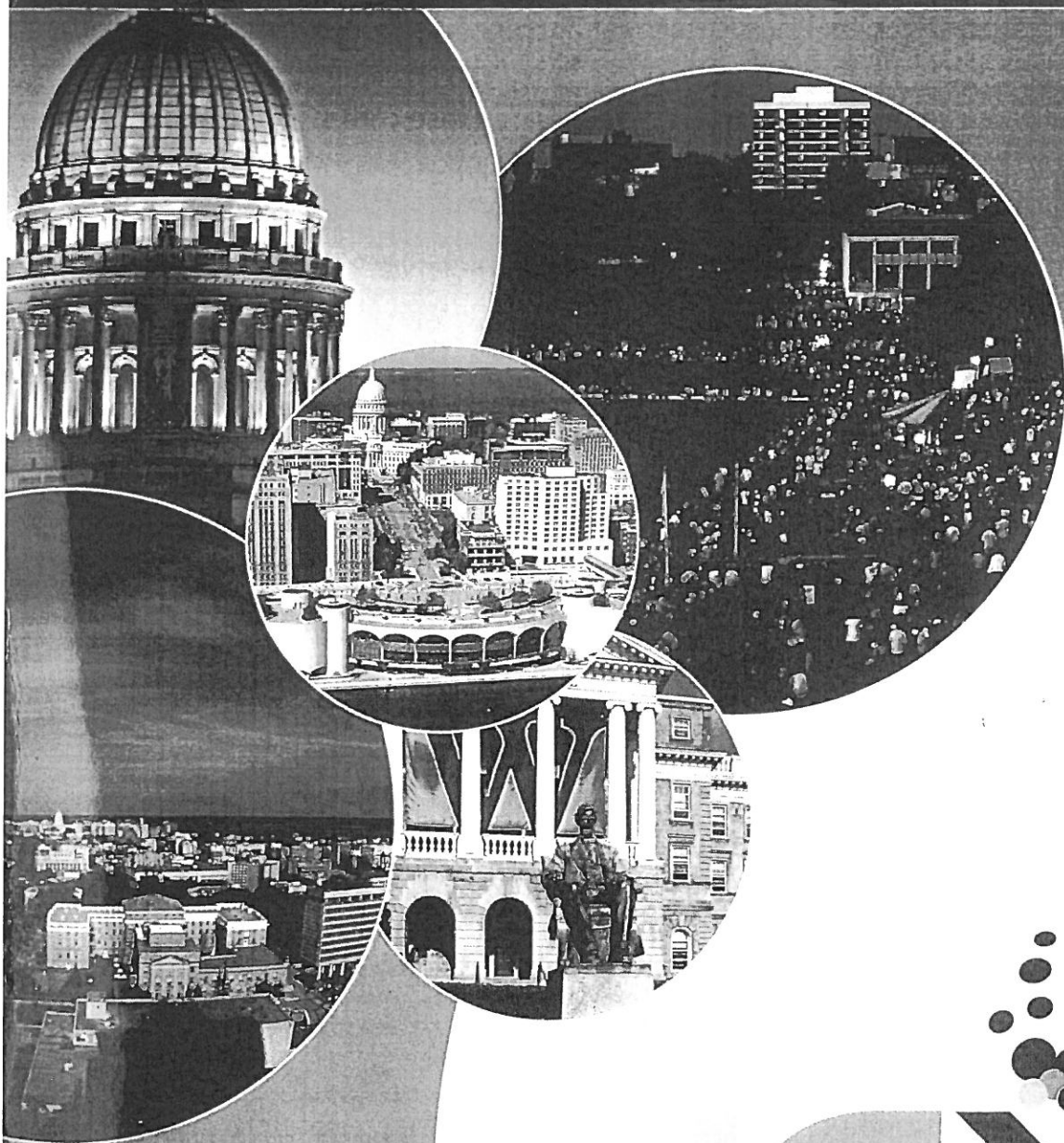
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Screening of *Debaryomyces* strains for survival under *in vitro* human gastro-intestinal conditions

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Today the use of yeast as human probiotics is more or less limited to the species *Saccharomyces boulardii*, which has been used in many countries for preventing and treating gastro-intestinal disorders, such as diarrhea. The current work aims to find potential human probiotic yeasts within other yeast species. The ability of yeasts to survive the gastro-intestinal conditions is an essential determinant in selecting a candidate probiotic. To be considered as probiotic, the yeast must reach the target site of action alive. Thus, in this study, yeast strains were screened for survival under *in vitro* human gastro-intestinal conditions. Thirty strains belonging to the genera *Debaryomyces* and two *Saccharomyces boulardii* strains were exposed for 4 h to a temperature of 37°C, pH 2.5, gastric juice or bile under aerobic, micro-aerophilic or anaerobic conditions. Survival of the strains was determined by spotting of serial dilutions in the range of 10^0 to 10^6 on agar plates. Survival was quantified as the log value of the highest dilution in which growth occurred. The results showed that the survival of the yeasts to all conditions was strain dependent, and that all strains generally were most tolerant to gastric juice.